

Fig. 1: Identification of differentially expressed genes in a fluorescence differential display screen

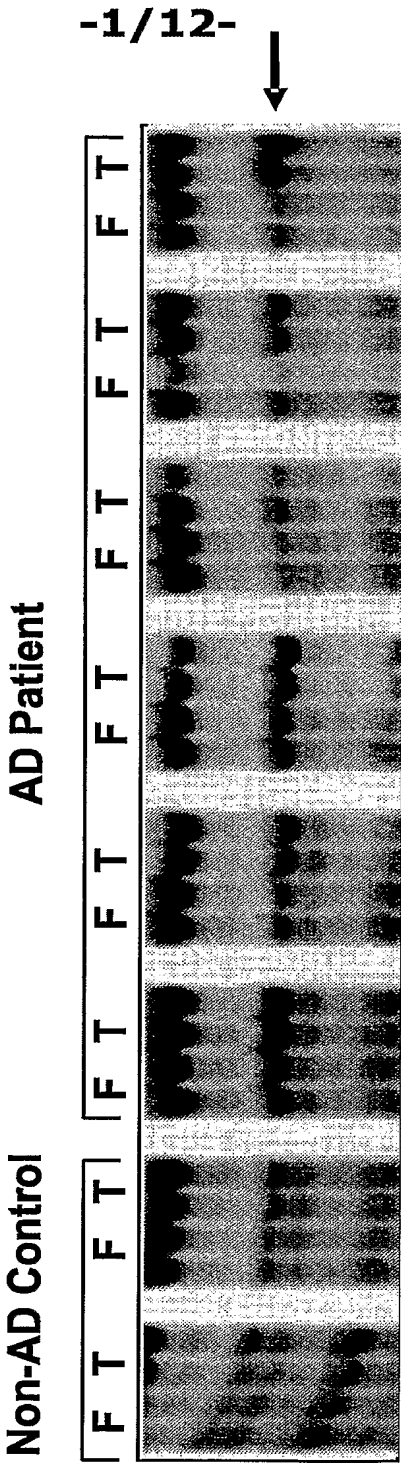


Fig. 2: Verification of differential expression of KCNE4 by quantitative PCR

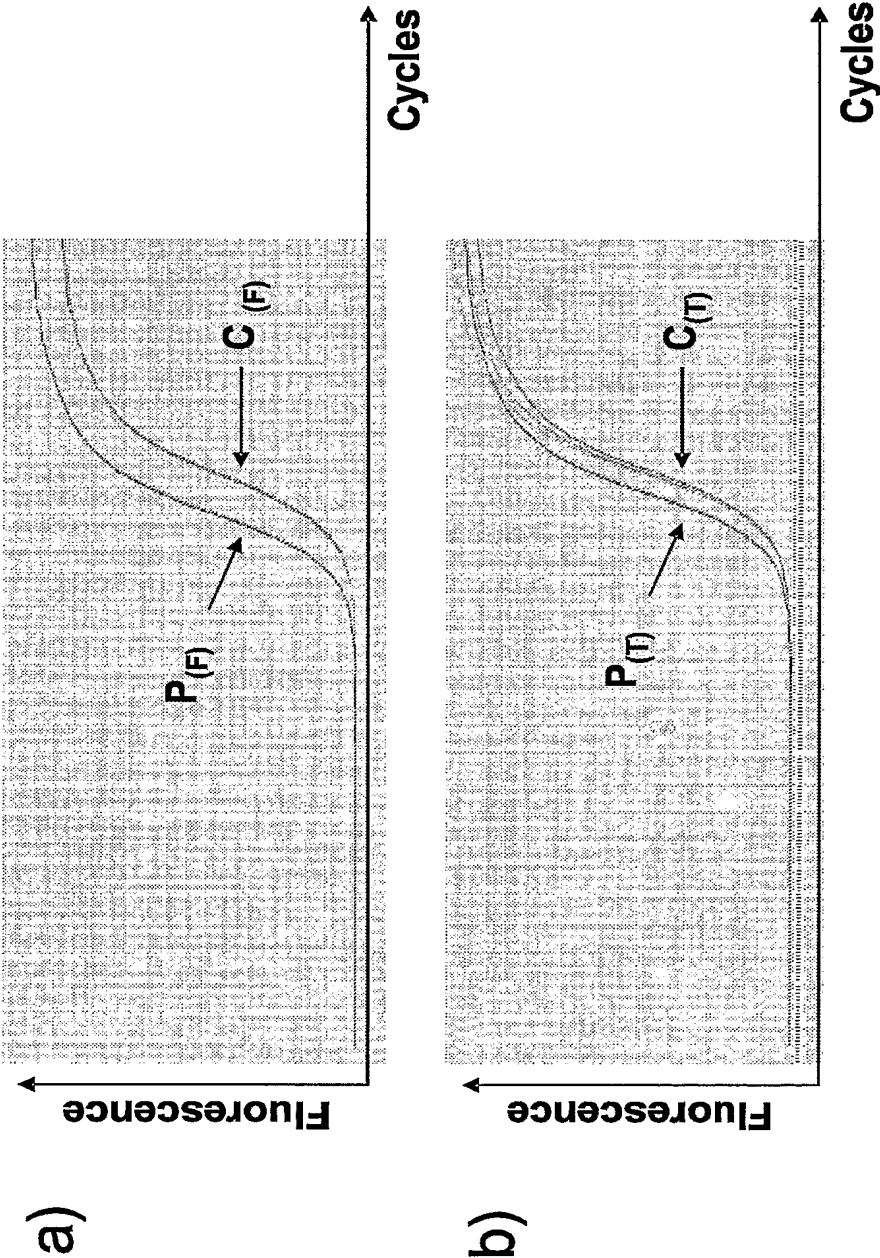
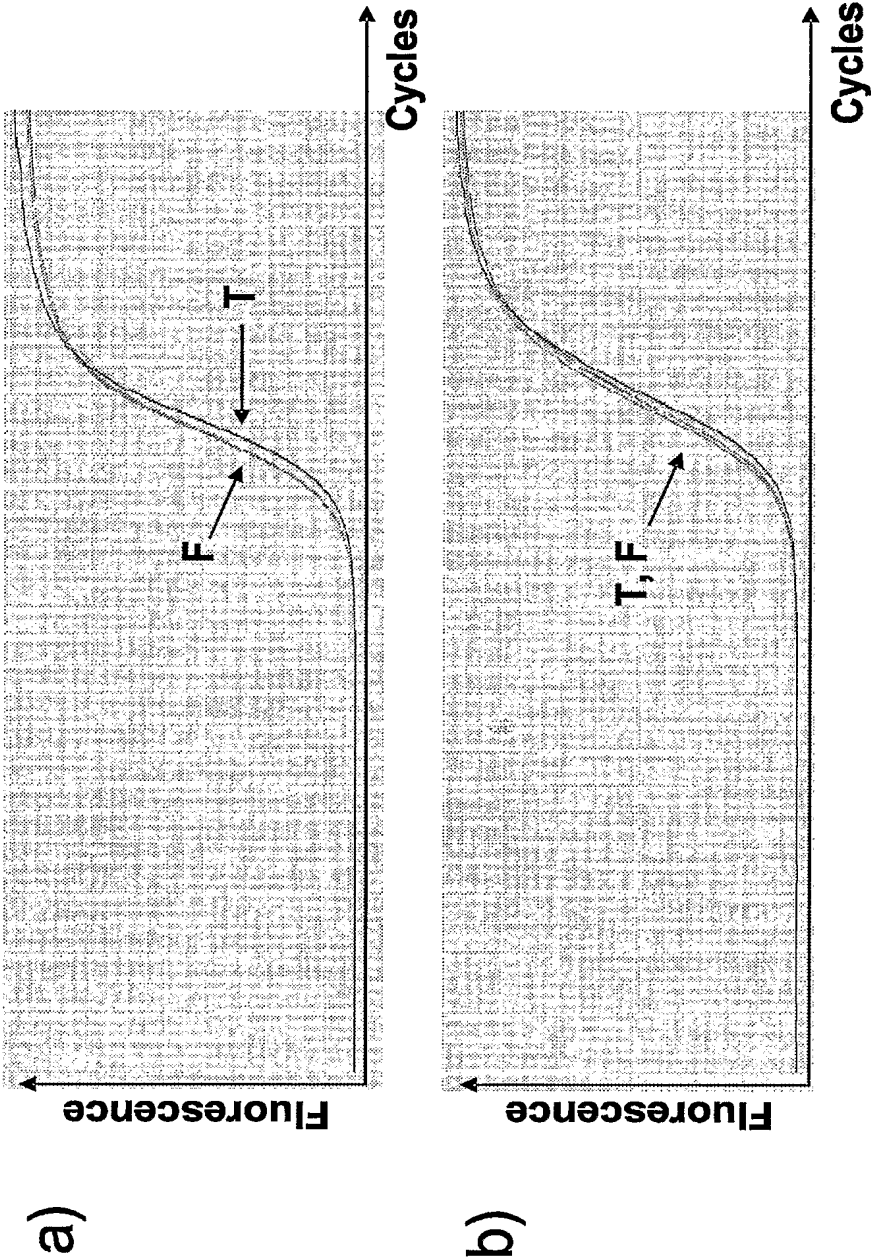


Fig. 3: Verification of differential expression of KCNE4 by quantitative PCR



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Fig. 4 : SEQ ID NO. 1:
amino acid sequence of
human KCNE4 protein

Length: 170 aa

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1  MLKMEPLNST  HPGTAASSSP  LESRAAGGGS  GNGNEYFYIL  VVMSFYGIFL
51  IGIMLGYMKS  KRREKKSSLL  LLYKDEERLW  GEAMKPLPVV  SGLRSVQVPL
101 MLNMLQESVA  PALSCTLCSM  EGDSVSSESS  SPDVHLTIQE  EGADEEELEET
151 SETPLNESSE  GSSENIHQNS
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Fig. 5: SEQ ID NO. 2:
nucleotide sequence of
human KCNE4 cDNA

Length: 1204 bp

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1  AGCAGAAGAA CCCTCTTGGA CTGGACGATT TGGGAATTCA AAACTTGGGA
51  CAAACTGTCA GCCTTGCCCC TGCTGTGGAG GCAGCCTCAA TGCTGAAAAT
101 GGAGCCTCTG AACAGCACGC ACCCCGGCAC CGCCGCCTCC AGCAGCCCCC
151 TGGAGTCCCG TGC GGCCGGT GGC GGCCAGCG GCAATGGCAA CGAGTACTTC
201 TACATTCTGG TTGTCATGTC CTTCTACGGC ATTTTCTTGA TCGGAATCAT
251 GCTGGGCTAC ATGAAATCCA AGAGGCGGGA GAAGAAGTCC AGCCTCCTGC
301 TGCTGTACAA AGACGAGGAG CGGCTCTGGG GGGAGGCCAT GAAGCCGCTG
351 CCCGTGGTGT CGGGCCTGAG GTCGGTGCAG GTGCCCCTGA TGCTGAACAT
401 GCTGCAGGAG AGCGTGGCGC CCGCGCTGTC CTGCACCCTC TGTTCATGG
451 AAGGGGACAG CGTGAGCTCC GAGTCCTCCT CCCC GGACGT GCACCTCACC
501 ATTCAGGAGG AGGGGGCAGA CGAGGAGCTG GAGGAGACCT CGGAGACGCC
551 CCTCAACGAG AGCAGCGAAG GGTCCTCGGA GAACATCCAT CAGAATTCCCT
601 AGCACCCCCG GGACCCCTGC GGTGGCTCC ATCAGCCAGC AACCTTAGAG
651 AGAGGAAAGA CAGTTTTCAA GTGTCTGTT TCACTTTCAC AGTGC GGCTG
701 CCACTTTGAA GAGACCCCTG GTAAACCCCT GATTCGGGGT GGGGTGGGGG
751 ACTAGGCTCA GCCGGAACCA GCACCTCCAA GGAGTCCGGG AGGTGCCCTGT
801 GGTTTGCACC CACCACTGAA AAAGCCGCGG AGATGCGCAG CGCGTACACT
851 GACTTTGGGG CCTGGGTGTT GGGGTCTGTA TCAGAAATTTG GCGGGATGAT
901 ATGCTTGCCA TTTTCTCACT GGATGCCCTG GGTAGCTCCT GCAGGGTCTG
951 CCTGTTCCCA GGGCTGCCGA ATGCTTAGGA CACGCTGAGA GACTAGTTGT
1001 GATTTGCTAT TTTGCCTAGA GCTTTGTCCT TCTAGATCTG ATTGGCTGTA
1051 AGTATCTCTA CTGTGTACCT GTGGCATTCC TTCACAGTGG GTTACAAGCT
1101 TCTTTTGGAT TAGAGGGGGA TTTTGTATGG GAGAAAGCTG GAGATCTGAA
1151 CCCAGCCCAT TTGCACACTA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA
1201 AAAA
```

-6/12-**Fig. 6: SEQ ID NO. 3****Length: 193 bp**

```
1  TAGTGTGCAA ATGGGCTGGG TTCAGATCTC CAGCTTTCTC CCATCAAAAA
51  TCCCCCTCTA ATCCAAAAGA AGCTTGTAAC CCACTGTGAA GGAATGCCAC
101 AGGTACACAG TAGAGATACT TACAGCCAAT CAGATCTAGA AGGACAAAGC
151 TCTAGGCAAA ATAGCAAATC ACAACTAGTC TCTCAGCGTC ACC
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Fig. 7: SEQ ID NO. 4:
nucleotide sequence of
human KCNE4 coding sequence

Length: 513 bp

```
1  ATGCTGAAAA TGGAGCCTCT GAACAGCACG CACCCCGGCA CCGCCGCCTC
51  CAGCAGCCCC CTGGAGTCCC GTGCGGCCGG TGGCGGCAGC GGCAATGGCA
101 ACGAGTACTT CTACATTCTG GTTGTCTATG CTTTCTACGG CATTTTCTTG
151 ATCGGAATCA TGCTGGGCTA CATGAAATCC AAGAGGCGGG AGAAGAAGTC
201 CAGCCTCCTG CTGCTGTACA AAGACGAGGA GCGGCTCTGG GGGGAGGCCA
251 TGAAGCCGCT GCCCGTGGTG TCGGGCCTGA GGTCGGTGCA GGTGCCCCCTG
301 ATGCTGAACA TGCTGCAGGA GAGCGTGGCG CCCGCGCTGT CCTGCACCCT
351 CTGTTCCATG GAAGGGGACA GCGTGAGCTC CGAGTCCTCC TCCCCGGACG
401 TGCACCTCAC CATTCAGGAG GAGGGGGCAG ACGAGGAGCT GGAGGAGACC
451 TCGGAGACGC CCCTCAACGA GAGCAGCGAA GGGTCCTCGG AGAACATCCA
501 TCAGAAATTC TAG
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**Fig. 8: Alignment of SEQ ID NO. 2
with SEQ ID NO. 3**

Length: 193 bp

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193  GGTGACGCTGAGAGACTAGTTGTGATTTGCTATTTTGCCTAGAGCTTTGT 144
    ||  ||||||||||||||||||||||||||||||||||||||||||||
978  GGACACGCTGAGAGACTAGTTGTGATTTGCTATTTTGCCTAGAGCTTTGT 1027
    ||  ||||||||||||||||||||||||||||||||||||||||||||
143  CCTTCTAGATCTGATTGGCTGTAAGTATCTCTACTGTGTACCTGTGGCAT 94
    ||  ||||||||||||||||||||||||||||||||||||||||||||
1028 CCTTCTAGATCTGATTGGCTGTAAGTATCTCTACTGTGTACCTGTGGCAT 1077
    ||  ||||||||||||||||||||||||||||||||||||||||||||
93   TCCTTCACAGTGGGTTACAAGCTTCTTTTGGATTAGAGGGGGATTTTGA 44
    ||  ||||||||||||||||||||||||||||||||||||||||||||
1078 TCCTTCACAGTGGGTTACAAGCTTCTTTTGGATTAGAGGGGGATTTTGA 1127
    ||  ||||||||||||||||||||||||||||||||||||||||||||
43   TGGGAGAAAGCTGGAGATCTGAACCCAGCCCATTTCACACTA 1
    ||  ||||||||||||||||||||||||||||||||||||||||||||
1128 TGGGAGAAAGCTGGAGATCTGAACCCAGCCCATTTCACACTA 1170

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**Fig. 9 : Alignment of KCNE4 RT-PCR
primers with human KCNE4 cDNA,
SEQ ID NO. 2**

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1  GGTTTGCACCCACCACTGA 19
   ||||||||||||||||
801 GGTTTGCACCCACCACTGA 819

      19 TCAGAATTTGGCGGGATGA 1
      ||||||||||||||||
881 TCAGAATTTGGCGGGATGA 899
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**Fig. 10 : Schematic alignment of SEQ ID NO. 3
with human KCNE4 cDNA, SEQ ID NO. 2**

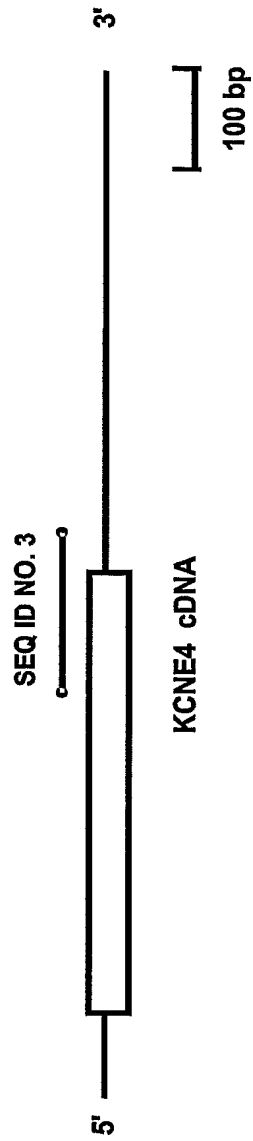
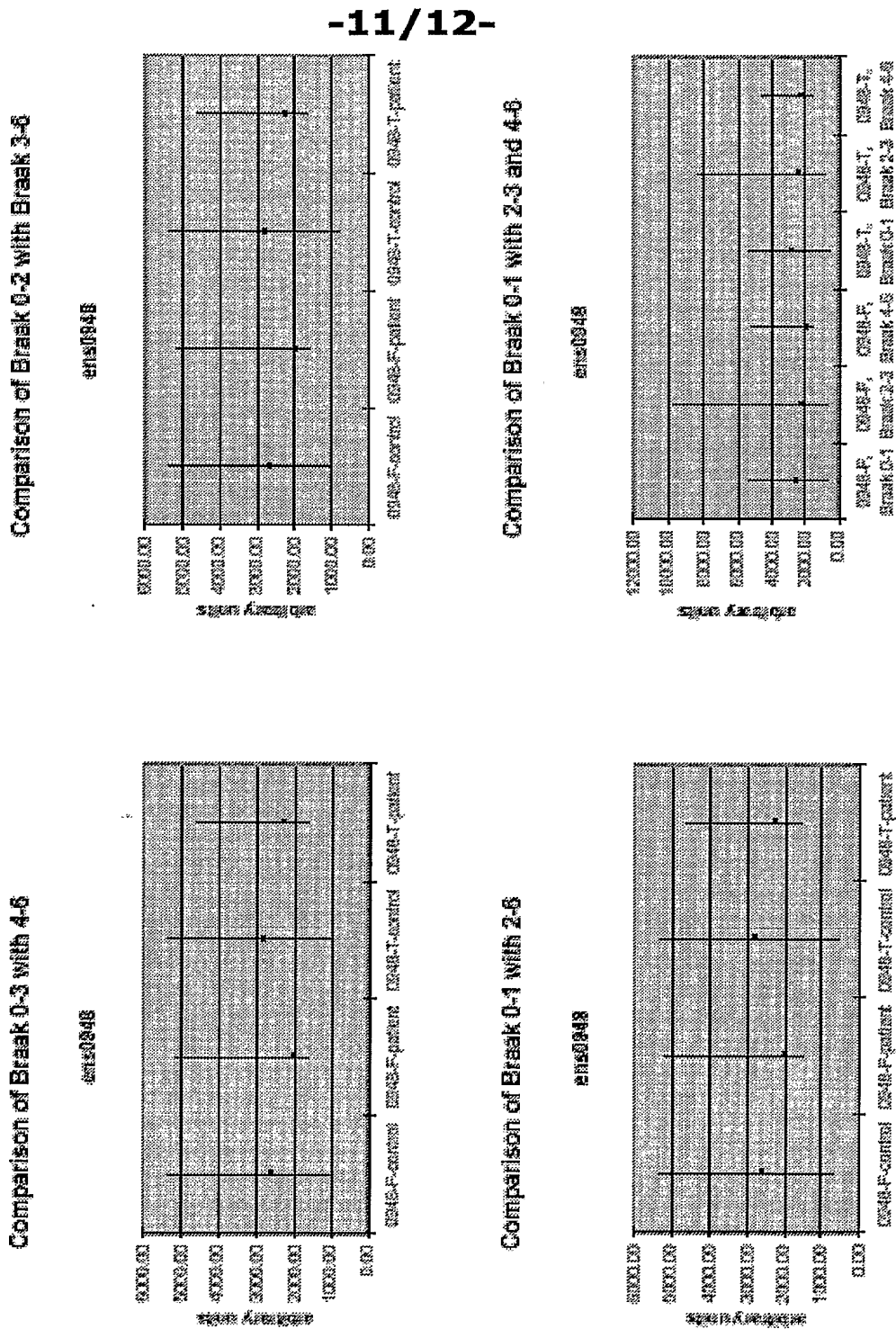


Fig. 11 : Analysis of absolute mRNA expression of KCNE4



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Fig. 12 :

